

**REMARKS**

Claims 1-9, 11-15, 17-19, 23-24, and 27-32 are rejected in the Action under 35 U.S.C. §103(a) as being unpatentable over Yamamoto et al. (EP 0522758) ("Yamamoto") in view of Okazaki et al. (U.S. Patent No. 5,389,422) ("Okazaki"), Tojo et al. (U.S. Patent No. 5,965,233) ("Tojo") and Kawai et al. (U.S. Patent No. 4,981,897) ("Kawai"). Claims 1-6, 11, 14-15, 17, 20-22, 27 and 31-32 are rejected under 35 U.S.C. §103(a) as being unpatentable over Shinonome et al. (EP 0398075) ("Shinonome") in view of Okazaki, Tojo, and Kawai. Claims 1-3, 9-10, 14-16 and 25-28 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kinoshita et al. (U.S. Patent No. 5,527,594) ("Kinoshita") in view of Okazaki, Tojo, and Kawai.

The position of the Office in each of these rejections is believed to be essentially the same. This position is that it would have been obvious to one of ordinary skill to form protrusions in a density as taught by Tojo, having a mean height as taught by Okazaki, on the surface of the base film of Yamamoto (or Shinonome, or Kinoshita) by controlling the orientation of the film as taught by Kawai. It is noted that each of the rejections relies on the proposed combination of the teachings of Tojo, Okazaki and Kawai.

Applicants respectfully submit that, for the following reasons, the prior art does not provide the requisite suggestion, teaching or motive required under 35 U.S.C. § 103(a) to select and combine the prior art references references relied on as evidence of obviousness. Thus, the 35 U.S.C. § 103(a) rejections are not properly supported.

First, the method for forming protrusions on the surface of a film are different among Yamamoto, Tojo and Okazaki, respectively. Thus, these references cannot be properly combined to support the obviousness rejection.

Second, the teachings of Kawai are insufficient for controlling fine protrusions as required in the present invention.

Third, the conclusion in the Action that Okazaki et al. discloses the maximum height - minimum height of the protrusions is wrong.

Thus, even if the references are combined as proposed, the film of the present invention will not be obtained.

Each of the above reasons is explained in detail below. Prior to such explanation, however, applicants would like to emphasize that providing a biaxially oriented film having fine protrusions in a high density formed on a surface thereon as claimed in the

present invention is very difficult and had not been known prior to the present invention.

Regarding the first reason for lack of proper support for the obviousness rejections, i.e., the differences in the methods for forming protrusions disclosed in the cited reference, three different methods for forming protrusions are disclosed in Yamamoto, Shinonome, Kinoshita, Tojo, Okazaki and Kawai. One is a method of mixing polymer 1 and polymer 2 by melt mixing. This method is hereinafter referred to as the "polymer alloy method". Another is a method of coating a coating layer on a base film. This method is hereinafter referred to as the "coating method". And another is a method of providing inert particles in a film. This method is hereinafter referred to as the "particle method".

Yamamoto and Shinonome disclose the polymer alloy method. Kinoshita and Tojo disclose the coating method. Okazaki and Kawai disclose the particle method. Each method involves different technology. The Office has not shown that a person of ordinary skill in the art would reasonably have expected the conditions and materials used in these different methods to be capable of being randomly combined with good results.

Regarding the second reason for lack of proper support for the obviousness rejections, i.e., the insufficiencies of Kawai, the

Office alleges in the Action that Kawai teaches that it is known that the number and density of protrusions formed on the surface of a film can be controlled by the orientation of the film (paragraph 9 of the Action). However, control of the number and density of protrusions by orientation of a film is limited in its controllable range. The particle size disclosed in Kawai is in the range of 2.5 to 12  $\mu\text{m}$ , i.e., 2500 to 12000 nm. Therefore, Kawai does not teach controlling of fine protrusions as required in the present invention.

Regarding the third reason for lack of proper support for the obviousness rejections, i.e., a misunderstanding of the disclosure of Okazaki, the Office states that Okazaki teaches that the mean height of the protrusions should be in the range of 20-200nm, wherein the relative standard deviation ( $100 * (\text{maximum height}) / \text{mean height}$ ) of the protuberances is  $\leq 40\%$ . The Office also states that for a mean height of 20nm, the minimum height cannot be below 12 nm and the maximum height cannot be above 28nm (paragraph 7 of the Action).

The Office's interpretation of the teachings of Okazaki is not correct. Okazaki does not teach that the relative standard deviation is  $\leq 40\%$ . Okazaki describes that the distribution of the relative standard deviation in the longitudinal direction is

$\leq 40\%$ . Although this matter is complicated, this disclosure of Okazaki essentially means that the relative standard deviation does not change significantly in the longitudinal direction. Okazaki is silent concerning whether the relative standard deviation itself is large or small. It is also noted that it is difficult to make the fine protrusions of the film of the present invention using the method disclosed in Okazaki. As shown in Table 3 in Okazaki, the mean height of protrusions is 0.07-0.17  $\mu\text{m}$ , i.e., 70-150 nm.

It is also noted that the position of the Office in paragraph 64 of the Action relating to the scope of claims 27-28 is not correct. Claims 27-28 recite a magnetic recording medium comprising a magnetic layer. A magnetic recording medium comprising a magnetic layer cannot reasonably be interpreted as reading on a magneto optic material. Although a recording layer of a magneto optic recording medium comprises a ferromagnetic metal, it has a structure and property different from a magnetic layer of a magnetic recording medium (because the recording and reproducing mechanisms are different). A magnetic layer of a magnetic recording medium has a recognized meaning in the art that excludes a magneto optic layer.

For the above reasons, the prior art does not support a case of prima facie obviousness of claims 1-32 and the 35 U.S.C. §

103(a) rejections applied to the claims are improper and should be removed.

The foregoing is believed to be a complete and proper response to the Office Action dated November 10, 2004, and is believed to place this application in condition for allowance. If, however, minor issues remain that can be resolved by means of a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number indicated below.

In the event that this paper is not considered to be timely filed, applicants hereby petition for an appropriate extension of time. The fee for any such extension may be charged to our Deposit Account No. 111833.

In the event any additional fees are required, please also charge our Deposit Account No. 111833.

Respectfully submitted,

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